Name _____ Date _____

Inequalities and Numbers Lines - Guided Lesson Explanation

For all three problems we need to know that:

A filled-in circle includes the number it is located on.
An open circle does not include the number it is located on.

We want to write an inequality that says *x* can be anything shown by the arrow and circle.

Explanation#1

The filled-in circle located on 11 means that *x* can be equal to 11.

The arrow pointing to the right means that *x* can also be any number greater than 11.

Since *x* can be any number greater than or equal to 11, the inequality is

$x \geq 11$

Explanation#2

The open circle located on 6 means that *x* cannot be equal to 6. The arrow pointing to the right means that *x* can also be any number greater than 6.

Since *x* can be any number greater than 6, the inequality is $x > 6$.

Explanation#3

The filled-in circle located on 20 means that *x* can be equal to 20. The arrow pointing to the right means that *x* can also be any number greater than 20.

Since *x* can be any number greater than or equal to 20, the inequality is

$x \geq 20$.